Attorney Docket No. 042715-5066
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: San Zhuang WANG et al.
Application No.: 10/681,467
Filed: October 6, 2003
For: SEAMLESS MASTER AND METHOD OF MAKING SAME

Confirmation No.: 7484
Group Art Unit: 1791
Examiner: Edmund H. Lee

Commissioner of Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22314

Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

I, Sanako Nishina, do hereby declare to my own knowledge that:

1. I am currently employed at Kawasaki R&D Laboratories of Asahi-Kasei Corporation, an assignee of the above identified application.

2. I am a graduate of Kyoto University, receiving my bachelor of science in March 1991 from the Department of Organic Chemistry.

3. I worked in the Kawasaki R&D Laboratories of Asahi-Kasei Corporation from April of 1991 to September of 1993, during which time I was engaged in development relating to synthesis of thermo-sensitive dye. From July of 2006 to the present, I have been engaged in research and patent management relating to optical films and at Central R&D Laboratories.

4. I make this declaration to provide data in support of the above identified patent application.

5. I had prepared under my direct supervision and control the following experiments to evaluate the differences between the speckle pattern in the above identified patent application (including the claims) and the relief pattern disclosed in WO 91/01225. These experiments were run to clarify differences between effects by the embossment on the surface derived from the

speckle pattern described in the present application (including the claims) and the embossment on the surface of an existing diffuser formed by sand-blasting.

6. All Experiments were run on November 2, 2010, from 9:30 AM until 3:30 PM on the fourth floor of the laboratory room in the Laboratory building at the integrated research complex, Asahi Kasei Group plant and laboratory site in Fuji City, Shizuoka, Asahi-Kasei Corporation. All experiments were run using Scanning Electron Microscope S-3000N manufactured by Hitachi, Ltd. Samples, each of which was five by five millimeters square, were cut off from both of the optical films. The region from which the samples were cut off was spaced from edges of the film by more than one centimeter. The samples were spattered with platinum. Photographs were taken with a magnifying power of 1000. Directions of photography were perpendicular to the sample (zero degrees), 30 degrees and 60 degrees with respect to the perpendicular direction.

Samples

Sample 1

Optical film of the present invention which has an embossment on the surface derived from the speckle pattern and isotropic diffusibility. The angle of diffusion (FWHM) is 80 degree.

Sample 2

Optical film of the present invention which has an embossment on the surface derived from the speckle pattern and anisotropic diffusibility. The maximum angle of diffusion (FWHM) is 60 degrees and the minimum angle of diffusion (FWHM) is 1 degrees.

Sample 3*

Matting film, Type A, Thickness of PET 100μm, Kaisei Industries, INC.

Sample 4*

Matting film, Type D, Thickness of PET 100μm, Kaisei Industries, INC.

* Please refer to attached document "Services & Products, Sand-Blasting / Matting".

Evidence

Picture No. 1 and 2: Sample1, Direction of photography: 0°
Picture No. 3 and 4: Sample1, Direction of photography: 30°
Picture No. 5 and 6: Sample1, Direction of photography: 60°
Picture No. 7 and 8: Sample2, Direction of photography: 0°
Picture No. 9 and 10: Sample2, Direction of photography: 30°
Picture No. 11 and 12: Sample2, Direction of photography: 60°

Picture No. 13 and 14: Sample3, Direction of photography: 0°
Picture No. 15 and 16: Sample3, Direction of photography: 30°
Picture No. 17 and 18: Sample3, Direction of photography: 60°
Picture No. 19: Sample4, Direction of photography: 0°
Picture No. 20: Sample4, Direction of photography: 30°
Picture No. 21: Sample4, Direction of photography: 60°

8. From these results, it is shown that there are complete differences between effects by the embossment on the surface derived from the speckle pattern described in the present application (including the claims) and the embossment on the surface of an existing diffuser formed by sand-blasting. The claimed speckle pattern is the pattern of the inverted, hollow cylindrical elastomeric member that is the result of performing the claimed process steps.

9. The cited reference (WO 91/01225) does not disclose a "speckle pattern." "Speckle pattern" means "a random intensity pattern produced by the mutual interference of a set of wavefronts." A copy of a relevant Wikipedia article is attached to this Declaration. The statistical distribution of the speckle pattern can be determined by changing the shape of the diffuser mask or optical distance from the diffuser mask. The relief pattern (formed by granular materials such as talc or sand) described in the cited reference is a random pattern, but is not a "speckle pattern."

10. WO 91/01225 does not disclose the one-piece invertible hollow cylindrical elastomeric master. Rather, WO 91/01225 discloses a silicone casting rubber which may be a reversible material, but does not disclose inverting it. Besides, the casting material in WO 91/01225 adheres to the sleeve 20, so that it cannot be inverted. (*See* pages 7 to 8 and FIGs. 2 to 4 of WO 91/01225.)

11. The claimed "sinc function" of claim 41 pattern of the speckle pattern in claim 41 is not obvious, and the Office Action did not provide any evidence or support for the statement that shows the "sinc function" is well-known in the roller art.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

June 27, 2011
Date

Sanako Nishina
Sanako Nishina

Exhibit A: Services & Products, Sand-Blasting / Matting
Exhibit B: "Speckle pattern." http://en.wikipedia.org/wiki/Speckle_pattern (retrieved February 17, 2010)